Building an open platform across diverse content and technologies

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Caltech Library

An open platform across diverse content and technologies...

Themes

Constraints and Opportunities
Metadata management and expression
Data flow and workflow
Connections: APIs and identifiers

Outline

Introduction
- Institutional context
- Repository diversity

Seed problems
Tools
Future directions
Principles/lessons learned

An open platform across diverse content and technologies...

Challenges

Working with limited resources (human, financial)
Matching needs across systems with staff skills
Maintaining multiple workflows and metadata standards

Responses

Focused activities
Staff specialization
Repository specialization
- Institutional repository
- Digital Library
- Research data
- Born digital

Our choices

- Institutional repository: EPrints
- Digital Library: Islandora (Drupal, Fedora Commons)
- Research Data repository: Invenio (TIND RDM)
- Born digital collections: ArchivesSpace, ePADD, etc.

“Building at the edge” : the seed problems ...

EPrints

- List of most recently published articles
- “Expensive” query in EPrints
- Decided not to develop plugin but to leverage API and create a data “feed”

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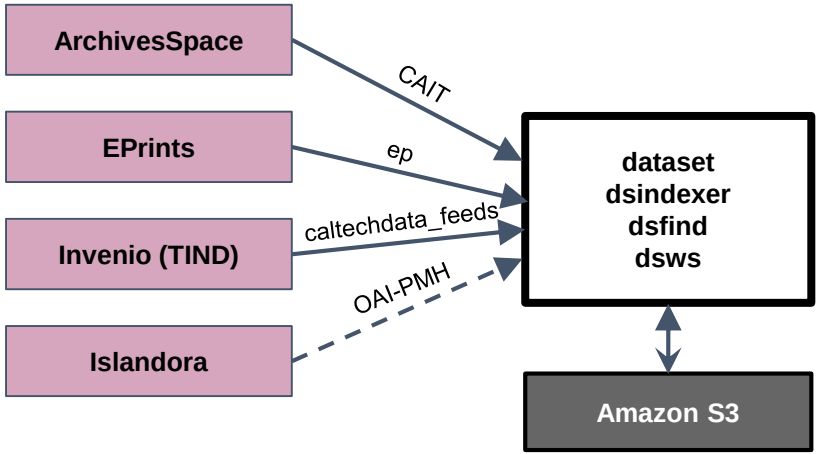
- Migration from ColdFusion & FileMaker Pro to ArchivesSpace
- Needed to replicate existing website functionality using AS data
- Feed of AS data drives website and populates generic “feeds”

Command line tools

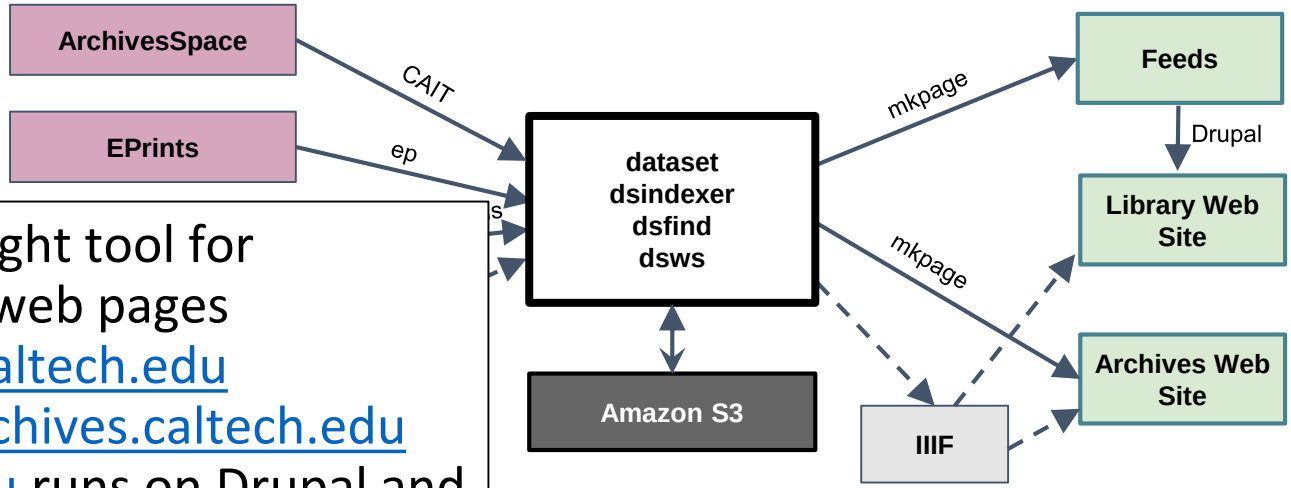
- dataset - a JSON document manager, on disc or in S3 storage
- datatools - utilities for working with JSON, XLS and CSV data

Middleware and systems integration



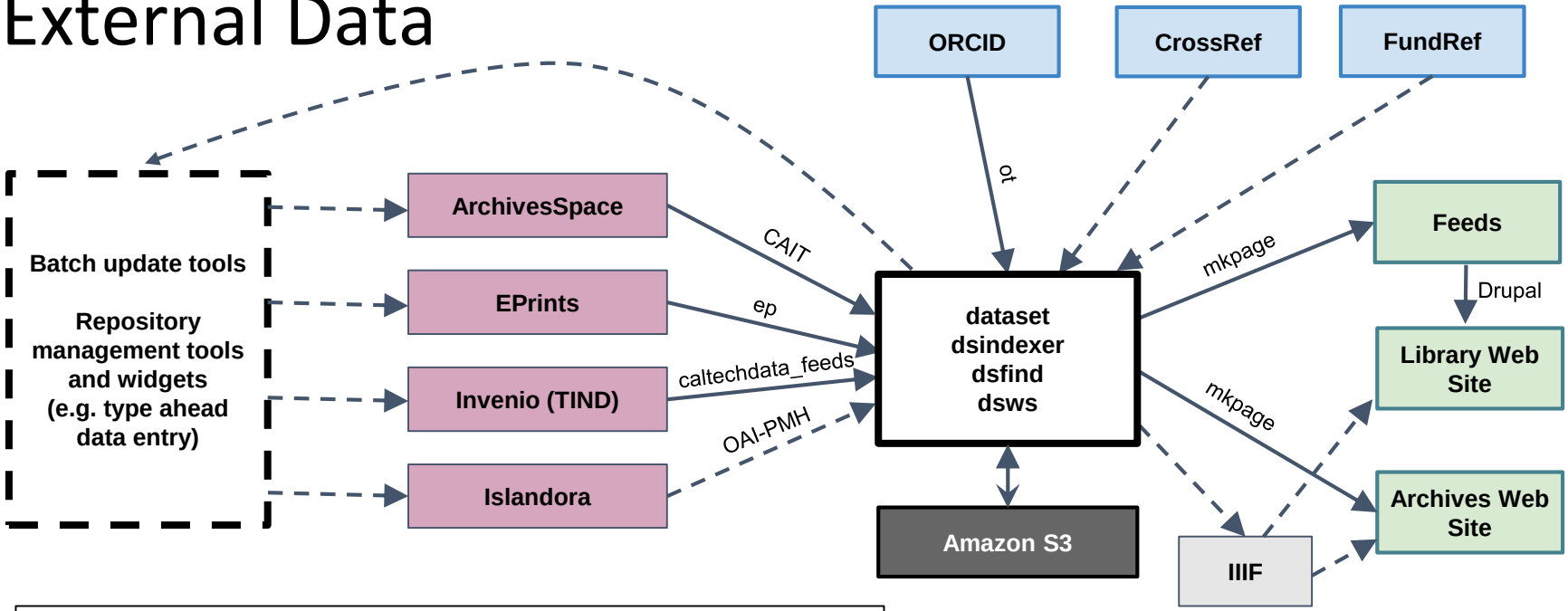
- cait - A set of utilities that augment the ArchivesSpace API
- ep - EPrints REST API harvest and client tools
- caltechdata_feeds - Use Invenio Read API to harvest metadata
- OAI-PMH - Will be used to harvest Islandora

Web applications



- mkpage - lightweight tool for generating static web pages
  - feeds.library.caltech.edu
  - Content for archives.caltech.edu
- library.caltech.edu runs on Drupal and pulls data from Feeds

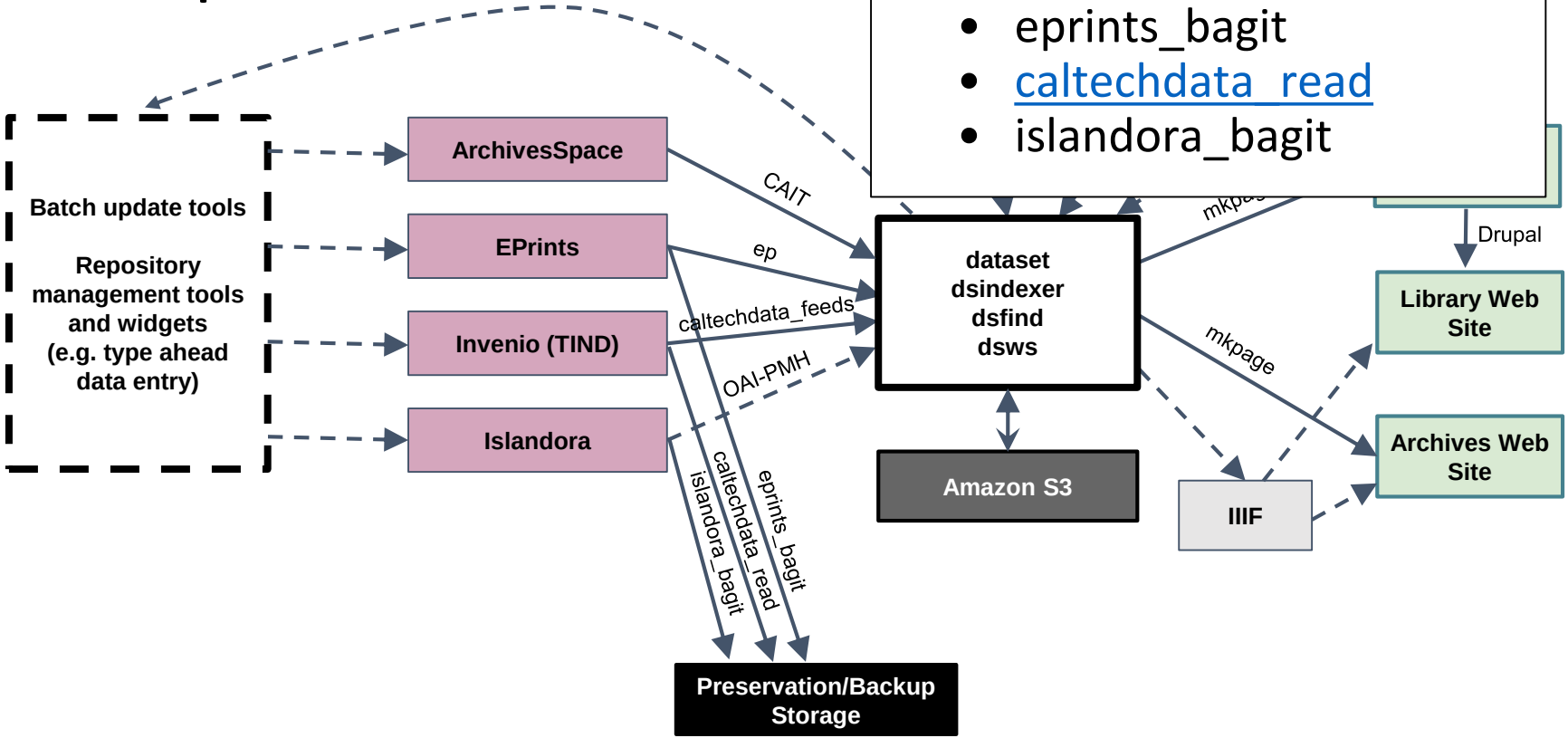
External Data



- ot – Collect info from ORCID API

Backup and Preservation

- Harvest content for preservation
  - eprints_bagit
  - caltechdata_read
  - islandora_bagit



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Welcome to Caltech Library's aggregated feeds

Content is organized around

- *Recent Articles* holds recent articles from *CaltechAUTHORS*
  - formats available: *JSON*, HTML *include*, *BibTeX*, *RSS*
- *Recent Publications* holds recent publications from *CaltechAUTHORS*
  - formats available: *JSON*, HTML *include*, *BibTeX*, *RSS*
- *Affiliation* holds a list of publications by *CaltechAUTHORS* group
- *Person* (experimental) listed by ORCID ID, each subdirectory containing publications, articles and recent feeds

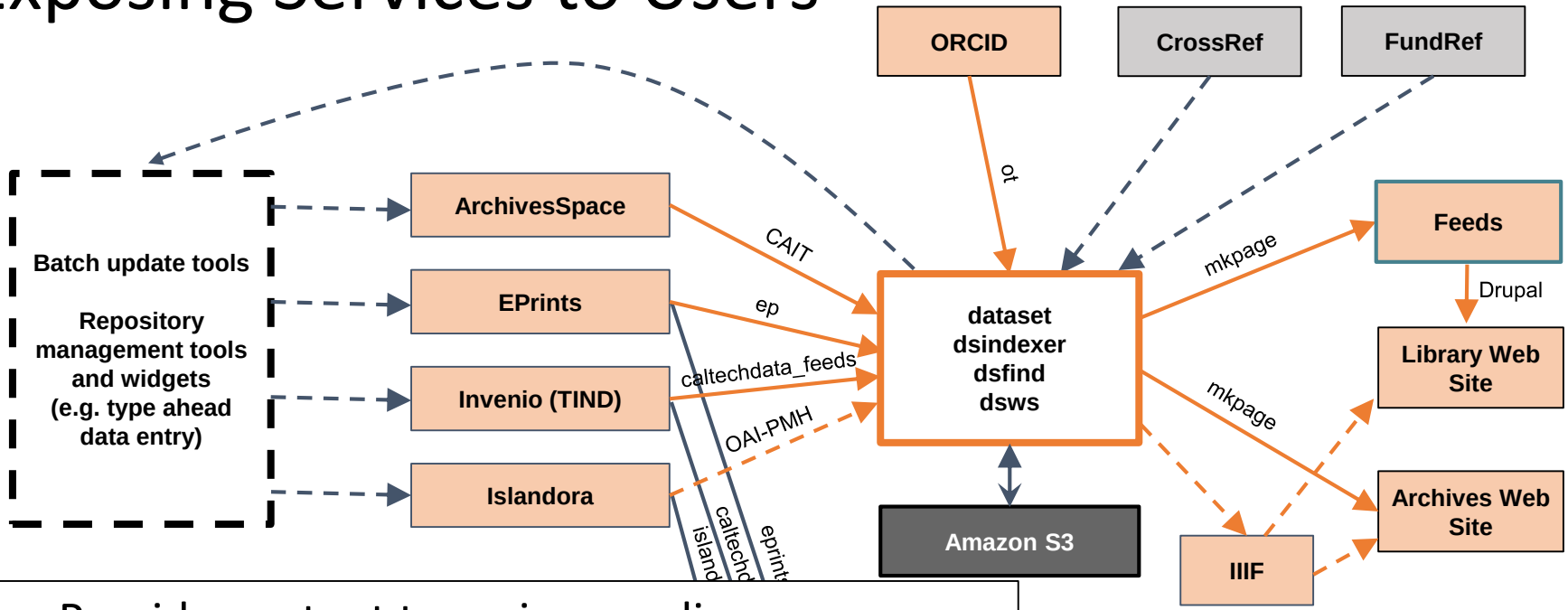
About the data in the feeds

Currrently we are generating feeds based on the public contents of CalechAUTHORS. Feeds are provided in the following formats

- *HTML* with the file extension of *.html*
- HTML Include (an HTML fragment suitable for including in another webiste) *.include*
- *BibTeX* with the file extension of *.bib*
- *JSON* with the file extension of *.json*
- *RSS 2* with file extension of *.rss*

If you find a web page with the content you're interested changing the file extension in the URL from *.html* to the format you want is usually all it takes.

Exposing Services to Users



- Provide content to various audiences
- Library website as starting point for all
- Website can display feeds from many sources

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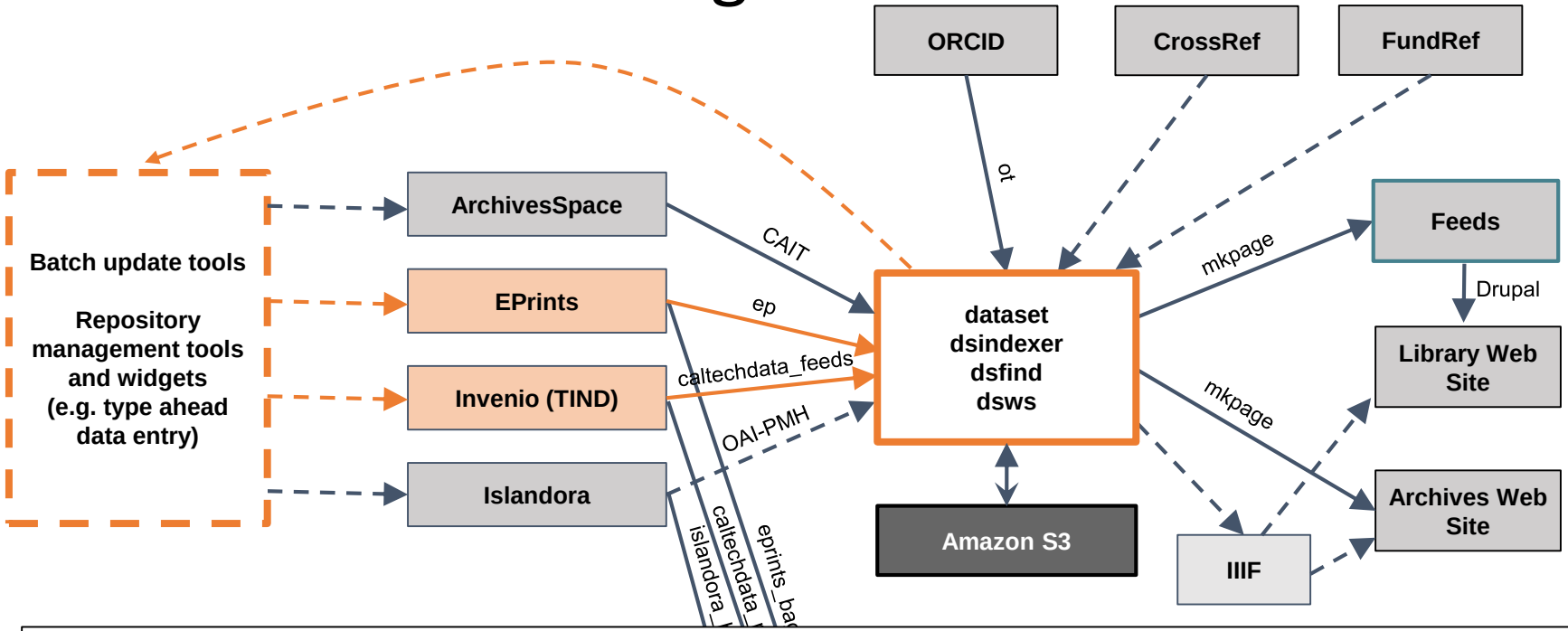
Future Work: Data Integration



- Connect publication and data records by “IsSupplement” tags
- Links added in one repository are automatically reflected in the other

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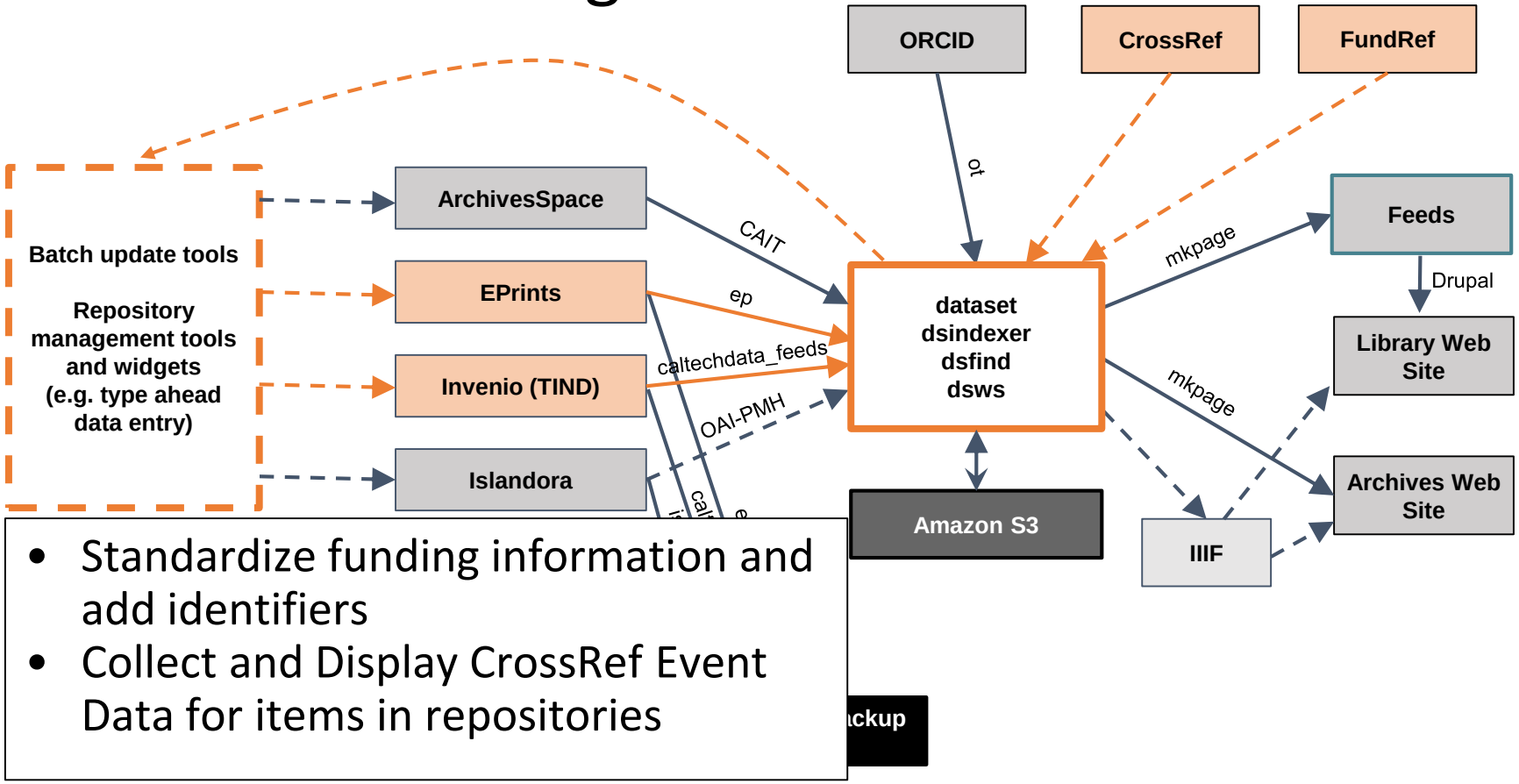
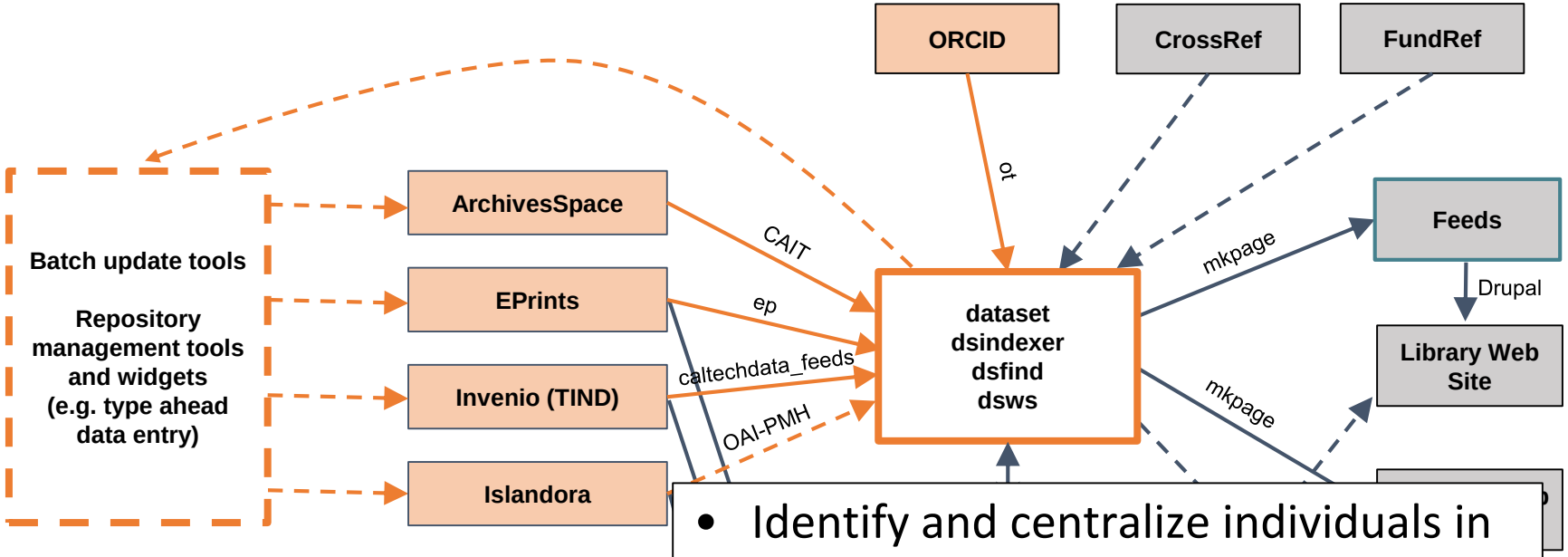
Future Work: Adding Metadata



- Standardize funding information and add identifiers
- Collect and Display CrossRef Event Data for items in repositories

Future Work: Author Identifiers



- Identify and centralize individuals in all repositories
- Determine Caltech affiliation
- Update other repositories with author identifiers

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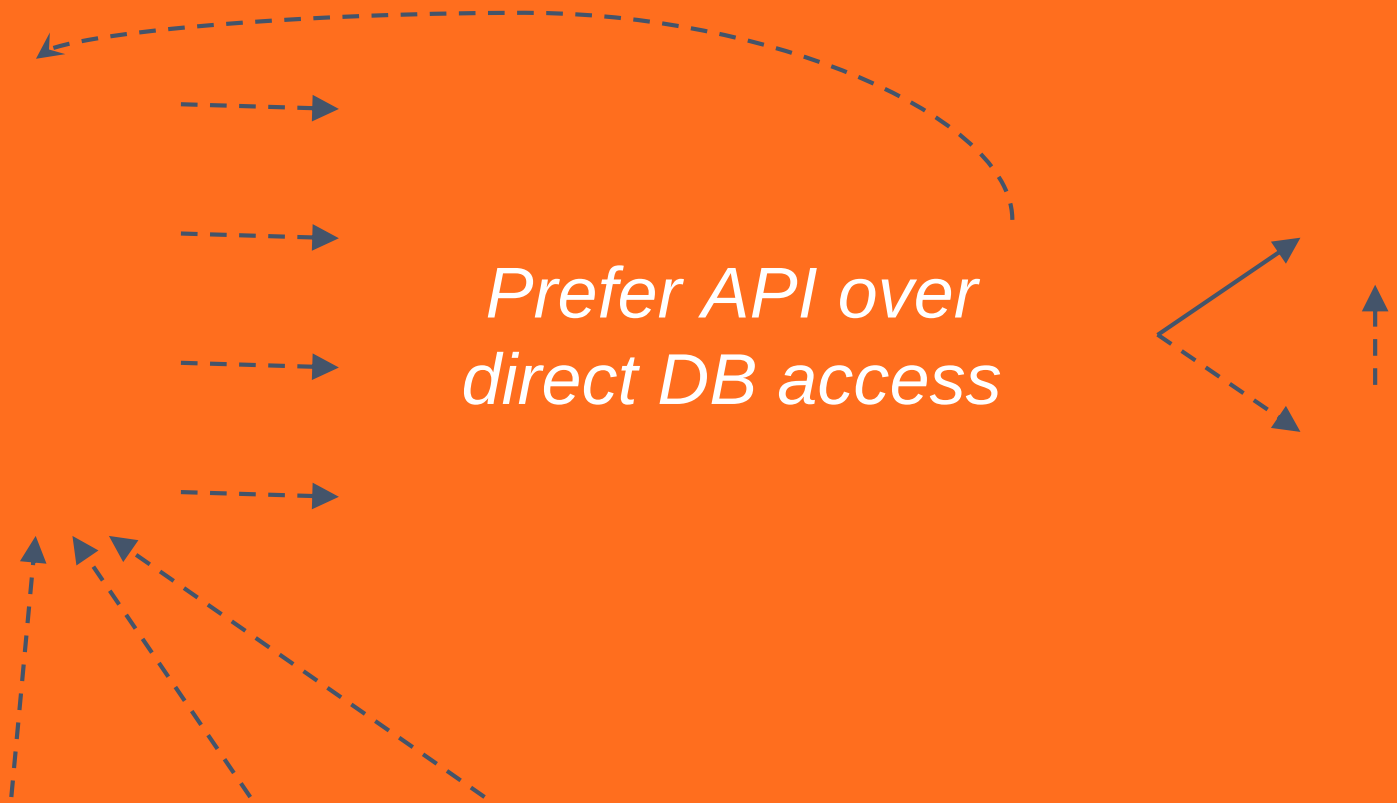

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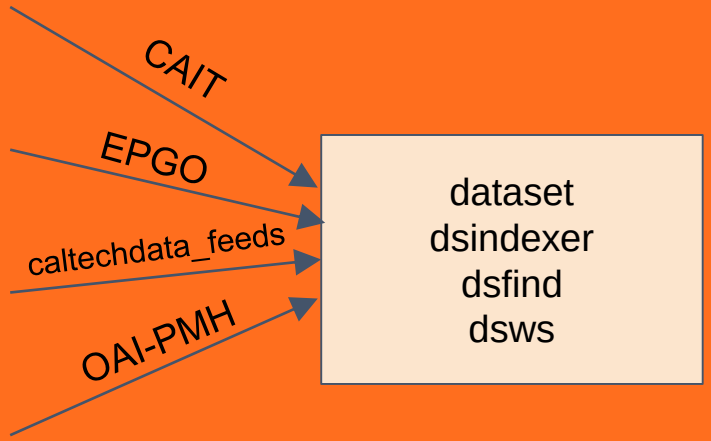
Prefer API over direct DB access



Develop small; iterate frequently

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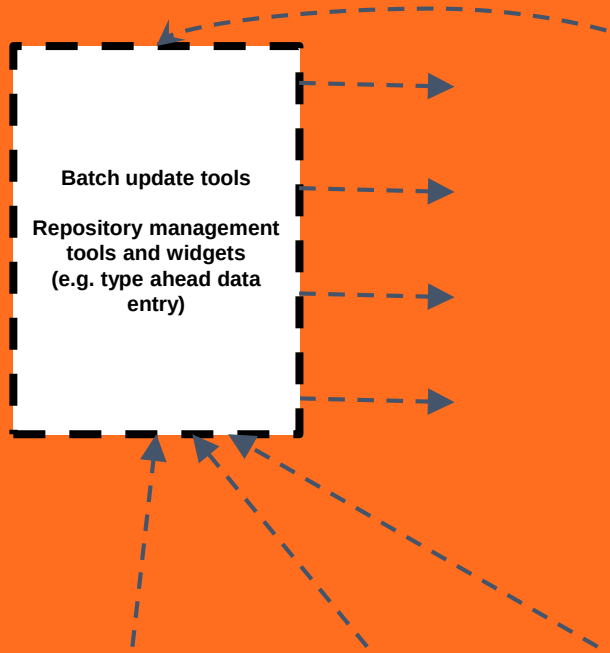
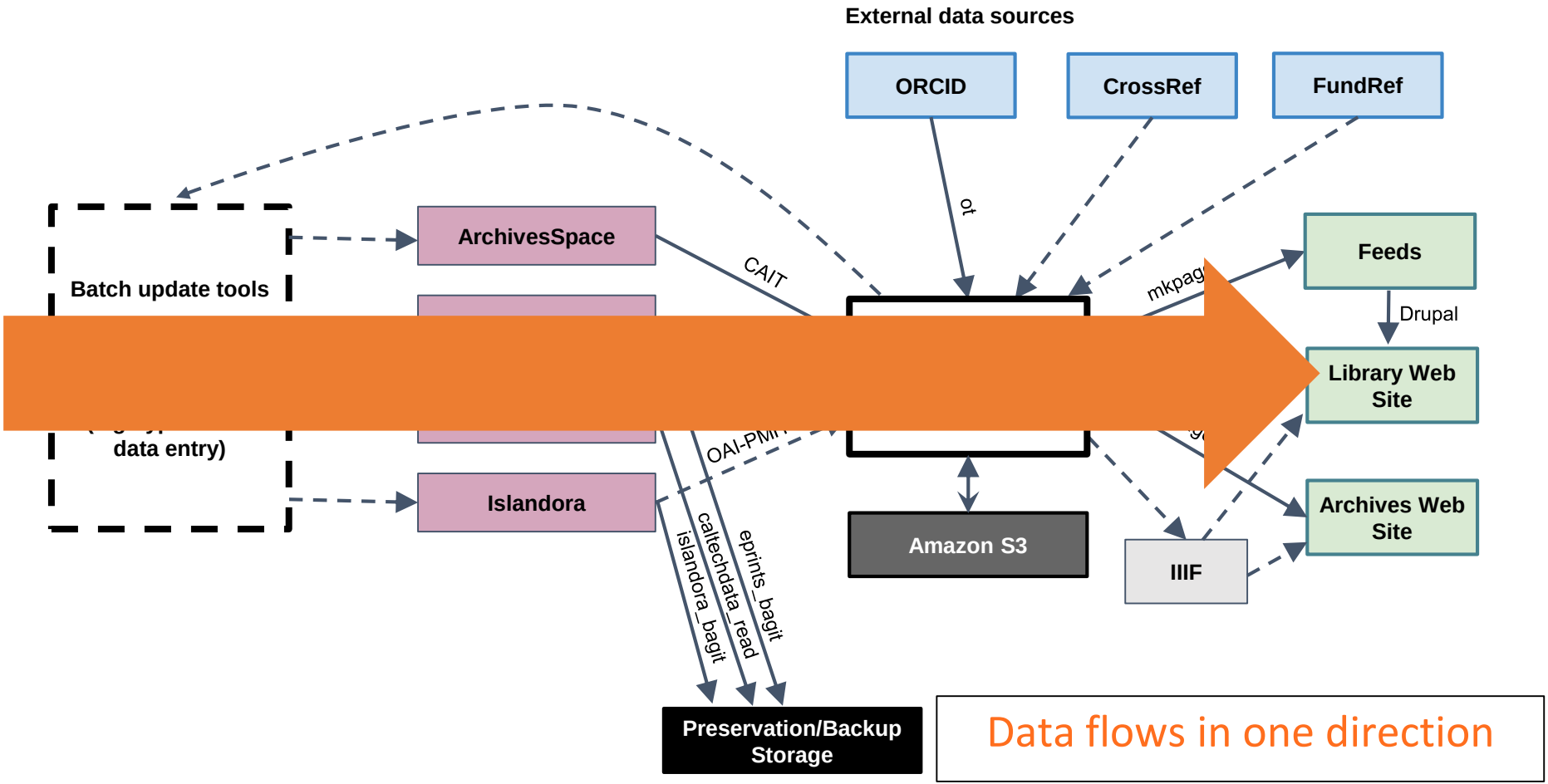


Keep structures simple

Prefer API over direct DB access

Develop small; iterate frequently



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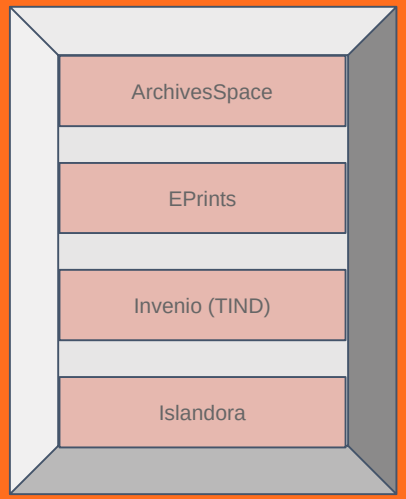
Keep structures simple

Develop at the edges

Prefer API over direct DB access



Develop small; iterate frequently

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Keep structures simple

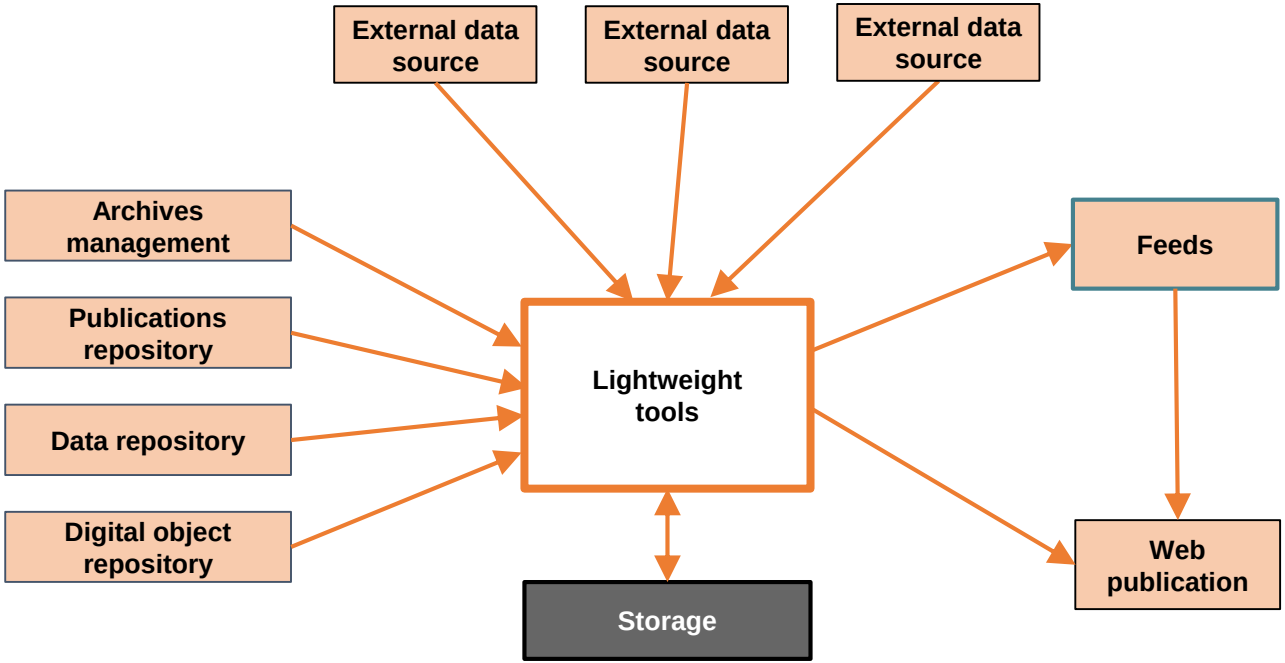
Develop at the edges

Prefer API over direct DB access

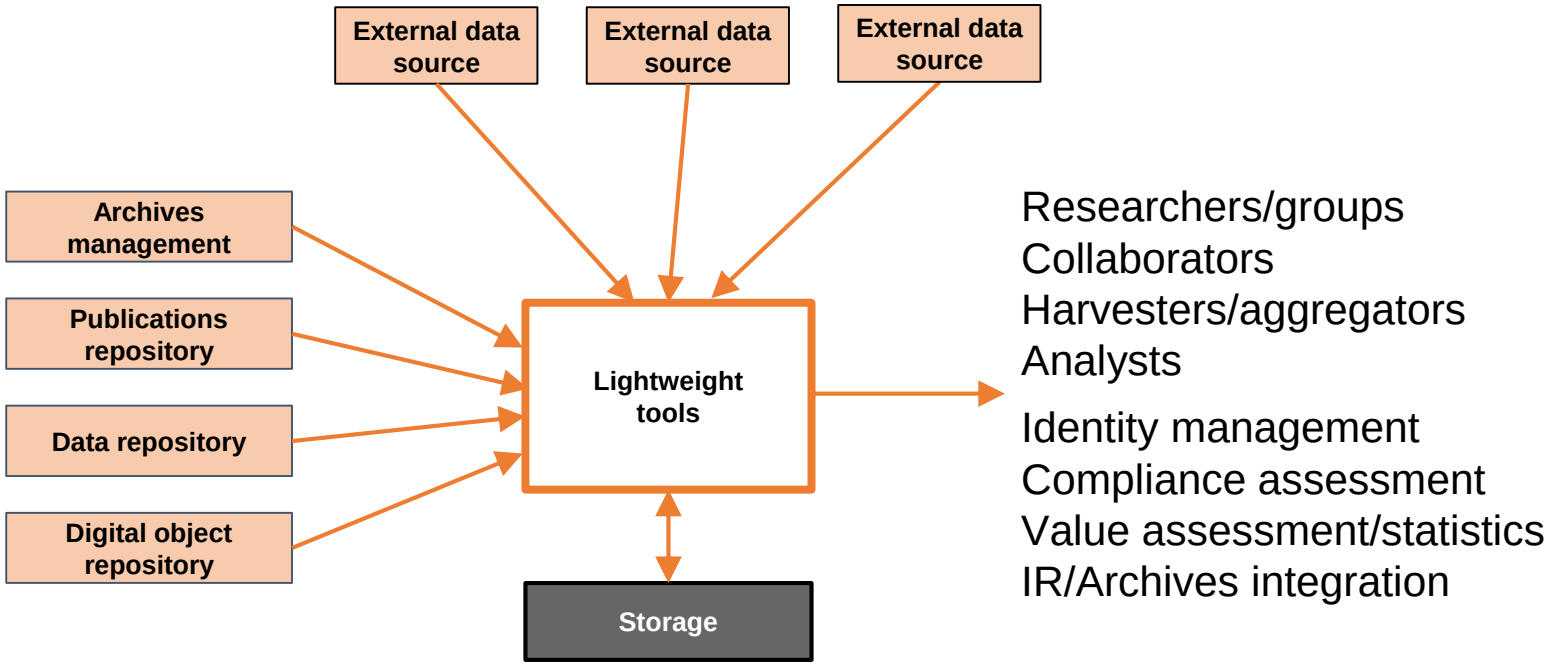
Ongoing harvesting, rather than one-off migrations

Develop small; iterate frequently

In the abstract…



Users and use cases



Why not Hydra/Samvera [or …]?

There will always be many specialized systems

Systems will come and go

Migration will be inevitable

Continuity at the core; change only when necessary

Continuous change “at the edges”

Concentrate on building user-oriented tools, services, feeds, web sites

Thank you

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http://feeds.library.caltech.edu
https://github.com/caltechlibrary/dataset
https://github.com/caltechlibrary/dataset-demo

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